REMARKS

Applicant has carefully reviewed the Office Action mailed December 23, 2003. Claims 1-22 are pending and have been rejected. Applicant respectfully traverses the rejection.

Claim Rejections—35 U.S.C. § 112

Claims 5-11 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the language in claim 5 of "a core member having a proximal end and distal end" was singled out as not defined in the specification and the drawing. Applicant respectfully disagrees and traverses the rejection.

The fact that a limitation in a claim may lack descriptive support in the disclosure as originally filed does not necessarily mean that the limitation is not enabled. MPEP 2164. The claim is directed toward an invention in the mechanicals arts, where there is a high level of skill in the art. The pertinent limitations are clear from the language of the claim. For example, the following may be readily extracted from the claim. The core member has an inner surface in fluid communication with a lumen of an elongate shaft of which the core member is a part. The core member also has an outer surface on which a raised pattern is disposed. One of skill in the art would readily be able to make a catheter on which this claim reads. Applicant, therefore, submits that the enablement requirement is met, and request withdrawal of the rejection.

Claim Rejections—35 U.S.C. § 102

Claims 1-5, 11-13 and 20-22 were rejected under 35 U.S.C. § 102(b) as being anticipated by Devanaboyina (U.S. Patent No. 5,571,114). Applicant respectfully disagrees and traverses the rejection.

Devanaboyina discloses a catheter having a tractor tread or conveyor belt type system attached to the outside of the catheter for moving the catheter into a lumen. The "tractor tread" is a loop configured to slide or loop over anchoring means attached to the catheter. The "tractor tread" may have a traction pattern such as a crosshatched or diamond shaped pattern.

Devanaboyina does not anticipate the invention of claim 1 because this pattern is disposed on the loop rather than on the outer surface of the elongate shaft as claimed. Also, the pattern disclosed in Devanaboyina does not define means for improving the transmission of torque along the elongate shaft when torqued, as claimed in claim 1.

The only applicable definition of dispose in the dictionary is "to place or set in a particular order; arrange". *The American Heritage Dictionary of the English Language, Fourth Edition.* In Devanaboyina, the tread pattern was not arranged on the outer surface of the catheter. Rather, it was arranged on the loop. The loop, and thus the pattern, is merely proximate the outer surface of the catheter. In contrast, the raised pattern of claim 1 is arranged on the outer surface of the elongate shaft and thus can define means for improving the transmission of torque along the elongate shaft when torqued.

The tread pattern disclosed in Devanaboyina does not define means for improving the transmission of torque along the elongate shaft when torqued. Arguing the other way, the Examiner cites column 6, lines 23-28 of Devanaboyina:

> The anchoring means utilized in the present invention need not be limited to two locations. It is also useful herein to utilize a plurality of anchoring means in combination. As described above, the anchoring means can be equipped with drive mechanisms to further facilitate ease of implement insertion.

This section talks about the anchoring means used to fasten the tread loop to the catheter. It does not talk at all about the raised pattern, nor does does it talk about how the raised pattern defines means for improving the transmission of torque along the catheter shaft. The raised pattern disclosed by Devanaboyina cannot improve the transmission of torque along the catheter shaft. The raised pattern of Devanaboyina is disposed on the tread loop, which is only loosely attached, through the anchoring means, to the catheter. Torque, which is the measure of a force's tendency to produce torsion or rotation, along the catheter shaft cannot be improved by this configuration. If one were to rotate one end of a catheter according to Devanaboyina sufficiently to produce some twisting, the raised tread disposed on the tread loop would not improve the transmission of torque along the catheter. Rather, it would merely start wrapping itself around the catheter.

In contrast to Devanaboyina, because the raised tread of the present invention is disposed on the catheter shaft, the invention of claim 1 is able to improve the transmission of torque along the shaft. First, the raised tread increases the moment of inertia of the shaft about its centerline, which increases its torque transmission capabilities. Second, at some level of torque, the thinner

parts of the shaft (the channels between the raised pattern) will deflect, allowing portions of the raised pattern to come in contact with each other, thereby improving torque transmission as described in the application. The raised pattern of the invention of claim 1 thus defines means for improved torque transmission along the shaft, while permitting the shaft to be more flexible than a shaft of the same thickness but not having the raised pattern.

Applicant thus submits that the invention of claim 1 is patentable over Devanaboyina. As claims 2-4 depend from claim 1 and contain additional elements, Applicant submits that these claims are allowable as well.

Claim 5 is patentable for similar reasons. Claim 5 recites in pertinent part "A catheter...comprising an elongate shaft having...a core member having...an outer surface...and a raised pattern disposed on the outer surface, the raised pattern further comprising a plurality of bearing points, wherein the raised pattern improves the transmission of torque along the elongate shaft by contact between the bearing points".

As described above with respect to claim 1, the raised pattern of Devanaboyina is not disposed on the outer surface of the core member, and does not comprise a plurality of bearing points. The language cited by the examiner (column 6, lines 23-28) refers to the anchoring means, which in any case, are not shown or described as contacting one another. The bearing points of claim 5, as noted in the specification, are within the raised pattern and provide a means by which one raised pattern section can transmit torque to another raised pattern section. Such a function is neither described in Devanaboyina nor possible using the catheter of Devanaboyina.

Applicant, therefore, submits that claim 5 is in condition for allowance. As claim 11 depends from claim 5 and contains additional elements, Applicant submits that this claim is in condition for allowance as well.

Again, claim 12 is thought to be allowable for substantially the same reasons. Claim 12 recites "disposing a raised pattern on the outer surface [of the elongate shaft of a catheter], wherein the raised pattern forms means for improving the transmission of torque along the elongate shaft".

As described above in detail with respect to claim 1, Devanaboyina does not disclose disposing a raised pattern on the outer surface of a shaft. Rather, Devanaboyina discloses disposing a pattern on a tread loop, which is loosely and indirectly fastened to the shaft.

Similarly, this pattern does not form means for improving the transmission of torque along the elongate shaft, for reasons described above.

Applicant, therefore, submits that claim 12 is in condition for allowance. As claims 12 and 20-22 depend from claim 12 and contain additional elements, Applicant submits that these claims are in condition for allowance as well.

Claim Rejections—35 U.S.C. § 103

Claims 6-10 and 14-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Devanaboyina. Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Devanaboyina in view of Moore et al. (U.S. Patent No. 4,669,465). Applicant respectfully traverses these rejections.

Claims 6-10 depend from claim 1, which Applicant submits is patentable, and contain additional elements. Applicant, therefore, submits that these claims are patentable.

Moore et al. do not disclose the elements missing from Devanaboyina. Specifically, Devanaboyina does not disclose at least the element of claim 12 of "disposing a raised pattern on the outer surface...". Therefore, as claims 14-19 depend from claim 12, which Applicant submits is patentable, and contain additional elements, Applicant submits that these claims are patentable as well.

Reexamination and reconsideration are respectfully requested. It is respectfully submitted that the claims are now in condition for allowance, issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

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By her Attorney,

Date: 3/23/04

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